## **EXHIBIT 1**

	Page 1
1	UNITED STATES DISTRICT COURT
2	NORTHERN DISTRICT OF GEORGIA
3	GAINESVILLE DIVISION
4	
5	SANTANA BRYSON and JOSHUA BRYSON, )
	as Administrators of the Estate )
6	of C.Z.B., and as surviving
	parents of C.Z.B., a deceased )
7	minor,
	)
8	Plaintiffs, ) No.
	) 2:22-cv-17-RWS
9	vs.
	)
10	ROUGH COUNTRY, LLC,
	)
11	Defendant. )
	)
12	
13	
14	VIDEOTAPED DEPOSITION OF CHARLES CROSBY, P.E.
15	Phoenix, Arizona
	May 14, 2024
16	9:00 a.m.
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19	
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22	DEDODTED DV.
<b>ງ</b> ၁	REPORTED BY:
23	Robin L. B. Osterode, CSR, RPR  Ch Cortified Shorthand Reporter No. 7750
24	CA Certified Shorthand Reporter No. 7750
24 25	AZ Certified Reporter No. 50695
43	

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- A. Those -- those are typically a percentage and so it's not a specific number, because it's a percentage of the width of the vehicle. So a vehicle that's 60 inches wide, for example, I -- I -- if it's a 50 percent offset, and it's a 60-inch wide vehicle, then you're going to offset at 30 inches. If it's an 80-inch-wide vehicle and you offset it 50 percent, it's going to be a 40-inch offset, so those offsets are typically given by percentage not by a specific number.
- Q. And under those test protocols, how -- how do they ensure that they've hit the offset mark?
- A. It depends on the protocol. There are -- in one of the protocols they actually put a, for lack of a better term, a marker pin on the front of the vehicle that they have set up pointing at a target and the target gives you a window that that marker pin has to be in in order for that to be considered a successful test.
  - Q. And did you do that with your crash test?
  - A. We did not.

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- Q. And why not?
- A. It -- one, it's not following that specific protocol, and so that reference window would not necessarily mean anything in this particular case.

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Q. Any other reason?

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- A. I wasn't requested to -- to verify it in that particular way.
  - Q. Were you requested to verify it in any way?
- A. After the test, we looked at the vehicle, generally, and -- and the offset appeared to be correct. So it was a visual inspection post test.

  Mr. Grimes and Dr. Gwin both looked at it and basically said that's what they expected with the offset that they had given me.
- Q. Do you know of any standardized offset crash procedure that allows the people doing the crash test to visually determine without any kind of measurements whether the offset hit its goal?
- A. So the one method I discussed where you kind of have that marker pin on the front, it -- when it hits the -- I'm trying to remember if it hits a barrier or if it's hitting another vehicle, but the marker pin makes a mark, and so then you can visually see where that mark was made and where your offset actually ended up.
- Q. I guess -- I guess I didn't ask the question right. But my question is whether there's any test procedure that allows the people performing the procedure to essentially eyeball it without a

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1	So what I'm looking for is whether there is
2	any test procedure that is just take a look at it and
3	see if it looks right for the offset?
4	MR. HILL: Object to the form.
5	But go ahead.
6	THE WITNESS: So so in this case we do
7	have forensic evidence that lines up. I mean, you
8	showed me in Plaintiffs' Exhibit
9	BY MS. CANNELLA:
10	Q. I'm not talking about
11	MR. HILL: Let him finish. He needs to
12	finish.
13	BY MS. CANNELLA:
14	Q. You're answering a different question,
15	so
16	MR. HILL: I don't think he is. Let him
17	answer the question.
18	BY MS. CANNELLA:
19	Q a test procedure just a test
20	procedure, like, NHTSA, IIHS, SAE, like, whatever
21	kind of organization that has a procedure that we can
22	go look at and say, you know, after you're done with
23	your offset, in order to make sure that you hit your
24	mark, just look at it so there's no point, match
25	point requirement, there's no measurement

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1	requirement, there's nothing like that.
2	Do you know of any test procedure like
3	that?
4	MR. HILL: Object to the form.
5	THE WITNESS: So that's what I was
6	answering before. So we talked about the pointer,
7	and I'm not talking about that pointer, there is, in
8	some of the offset tests, there is just a piece of
9	you've got your pre-test measurement with your
10	offset, and then you look at the the vehicle post
11	test and you can see where the damage pattern starts.
12	And if it's where you've got that offset mark at,
13	then you're within your your test parameters, and
14	you've offset the vehicle the correct amount.
15	BY MS. CANNELLA:
16	Q. So what I'd like to do is be able to go
17	look at those procedures so that we can see.
18	A. Uh-huh.
19	Q. What are they?
20	A. I would look at the IIHS offset frontal
21	tests.
22	Q. Okay. Any others?
23	A. You can look at the probably the NHTSA
24	or NCAP frontal tests to see I don't believe there
25	is any procedure or protocol in there that has a

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1	specific measurement like you have to go and put a
2	tape measure on it to make sure your offset's the
3	correct way, it would just be a post-test visual.
4	Q. Okay. All right. And do you know the name
5	of those tests, like for NHTSA, FMVSS number, number,
6	number?
7	A. Yeah, so your FMVSS tests, you can run
8	several of those with a single crash test, so you can
9	go and look at your 35-mile-an-hour frontal barrier
10	NCAP test, trying to think of what other NHTSA
11	testing you could go and look at. Maybe some of the
12	side impact testing that NHTSA runs.
13	Q. Is that offset?
14	A. Those are full overlap, but they are
15	crabbed, meaning that the the vehicle coming in is
16	actually coming in at an angle.
17	Q. Okay. I'm looking for offset ones, though.
18	A. Okay.
19	Q. Any offset ones?
20	A. I can't remember any more.
21	Q. Okay. That's a fine answer. I'm just
22	trying to make sure.
23	THE REPORTER: Is this a good time for a
24	restroom break?
25	MS. CANNELLA: Yes, ma'am.

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1	MR. HILL: Object to the form.
2	But go ahead.
3	THE WITNESS: Yes, to to the degree of
4	which they were set up for, you can rely on them for
5	their their designated purpose.
6	BY MS. CANNELLA:
7	Q. Which is?
8	A. A visual representation of of the
9	interaction between the vehicles.
10	Q. Okay. Is that is that narrower than
11	just relying on them?
12	A. Well, in some cases we will specifically
13	set up cameras to then do not just a visual, we want
14	to see what happened, we may actually do some video
15	analysis with the cameras where you can actually take
16	the video and make certain measurements or estimates
17	of deformations or speeds or angles or anything like
18	that.
19	Q. With photogrammetry you're talking about?
20	A. Photogrammetry or or some video tracking
21	software that's available.
22	Q. Did you set up videos in this crash test to
23	be able to take measurements?
24	A. These videos were not specifically set up
25	for to do those measurements in this case.

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1	Q. And why not?
2	A. The cameras were requested to be put there
3	as a as a visual only.
4	Q. Okay. And what would you have done
5	differently to be able to take measurements?
6	A. There's a couple of things. We do
7	not we don't do them all every time, it just
8	depends. But we may have had different marker boards
9	on the ground. We may have also done what's called a
10	camera calibration where you take a known grid or
11	kind of photo set and you record that and then you
12	can use that in the software to understand your
13	distortion in the camera. All lenses, you know, have
14	some distortion, because we're trying to make a
15	square image with a round lens, so you can get some
16	lens distortion, and if you set it up correctly and
17	do some stuff preliminarily you can eliminate that or
18	reduce that distortion, I should say.
19	Q. Okay. And so is there distortion in the
20	photos and videos that you took?
21	A. Yes.
22	Q. Okay. So how can the jury know how to
23	assess that distortion?
24	A. So specifically for for, like, the

photos that I take, even on a still camera there's

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1	3 feet after impact, correct?
2	A. Correct. 3 feet over top of the Escape.
3	Q. Okay. Wait, let me make sure I understand.
4	So from the ground, 3 feet from the ground?
5	A. No, no, no. So if you so if you if
6	your zero reference is at the point of where the F250
7	and the Escape are going to make first contact and
8	center line of the rail, then that camera was 3
9	feet approximately 3 feet, what I'll call
10	downstream, which is going to put it over the top of
11	the Ford Escape, because the zero is the Ford
12	Escape's bumper.
13	Q. Got it.
14	A. I will say after looking at the video, it
15	does appear that we probably weren't directly over
16	the rail left to right. So we did the our best to
17	center the camera over the center of the rail, but
18	we're not likely directly over that.
19	Q. And why do you say that?
20	A. Because there's a little bit of distortion
21	and you can kind of look at the overhead video and

Q. And tell me everything that that opinion is

you can start to tell which direction the camera may

have been slightly moved or which direction the

camera was angled.

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1	then we'll mark that as Plaintiffs' Exhibit 122.
2	THE REPORTER: We already have a 122.
3	MS. CANNELLA: 123.
4	THE REPORTER: We already have a 123.
5	MS. CANNELLA: 124. Okay. I tried. I
6	failed.
7	THE REPORTER: That's okay.
8	(Marked for identification Exhibit 124.)
9	MS. CANNELLA: All right. Moving on.
10	MR. HILL: And that was just a screen
11	capture of where he circled the lines?
12	MS. CANNELLA: Yes.
13	Q. Okay. Can we agree that the F250 got off
14	course, to some degree?
15	A. Yes.
16	Q. Okay. And do we have any other way to
17	measure how much it got off course aside from the
18	video?
19	A. Yes.
20	Q. And that would be using the physical Ford
21	emblem, correct?
22	A. That would be one of the things we can look
23	at, yeah.
24	Q. And what else, scan data?
25	A. Scan data. There is evidence from the tow

800.808.4958

770.343.9696

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1	Q. And January 11th, 2023?
2	I'll let you go through this, because it
3	looks like that's what we've got for February as
4	well, and March.
5	A. Did we go up through March?
6	Q. Yeah, so if you want to go ahead and add
7	those instead of me reading them all to you, that
8	would be great.
9	A. I've got my phone off, if someone has a
10	calculator I can borrow.
11	MS. CANNELLA: Can you share your phone
12	with him so I don't hand over mine.
13	Thank you.
14	Q. Do you have it?
15	A. Yes.
16	Q. What's the total?
17	A. So I have a total through March of
18	\$222,634.13.
19	Q. 222,600 and
20	A. 34.
21	Q. And that's how much RC paid to Exponent for
22	crash testing, including your services, correct?
23	MR. HILL: Object to the form.
24	But go ahead.
25	THE WITNESS: Correct.

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1	STATE OF ARIZONA )
	COUNTY OF MARICOPA )
2	
3	CERTIFICATE
4	I, ROBIN L. B. OSTERODE, Certified Shorthand
5	Reporter for the State of California and Certified
6	Reporter for the State of Arizona certify:
7	That the foregoing proceeding was taken by
8	me; that I am authorized to administer an oath; that
9	any witness, before testifying, was duly sworn to
10	testify to the whole truth; that the questions and
11	answers were taken down by me in shorthand and
12	thereafter reduced to print by computer-aided
13	transcription under my direction; that review and
14	signature was requested; that the foregoing pages are
15	a full, true, and accurate transcript of all
16	proceedings, to the best of my skill and ability.
17	I FURTHER CERTIFY that I am in no way
18	related to nor employed by any of the parties hereto,
19	nor am I in any way interested in the outcome hereof.
20	DATED this 28th day of May, 2024.
21	
22	
23	Halfind B. Ookrode
24	ROBIN L. B. OSTERODE, CSR, RPR
	CA CSR No. 7750
25	AZ CR No. 50695